

- Aluteridae, and descriptions of seven new species. *Ann. Mag. nat. Hist. (11)*8: 325, text-fig. 6.
- JONES, S. (1969): Catalogue of fishes from the Laccadive Archipelago in the reference collections of the Central Marine Fisheries Research Institute. *Bull. Cent. Mar. Fish. Res. Inst.* 8: 31.
- JONES, S. & M. KUMARAN (1980): Fishes of the Laccadive Archipelago: 683, fig. 581.
- MUNRO, IAN S.R. (1955): The marine and freshwater fishes of Ceylon: 274, pl. 53.
- SMITH, J.L.B. (1953): The sea fishes of Southern Africa: 1138 (only *Paramonacanthus barnardi*), pl. 88.

27. *PIERIS BRASSICAE* LINNAEUS (LEPIDOPTERA: PIERIDAE) IN DELHI

There are numerous records of the Large Cabbage White (*Pieris brassicae* L.) from the plains adjoining the Himalaya. It appears sporadically and has been recorded from Amritsar (Sanders 1930), Peshawar and Fatehgarh (Peile 1937), Lucknow, (Rhé Philipe, 1902) and "E. Bengal, Behar" (Maxwell-Lefroy 1909).

Recently, Rose and Venkatesh (1995) bred the species in Patiala from eggs collected locally.

Donahue (1967) predicted the appearance of this butterfly in Delhi. On 10th April, 1996, I found a female *brassicae* beside the road south of Yusuf Sarai in New Delhi. The specimen is worn and the abdomen is flaccid, indicating that oviposition had taken place. On 13th April, 1996, I saw a male of the species in a private garden in Defence Colony and on 15th April, 1996, another male in the company of *Catopsilia pyranthe* L. at Dhaulakuan, in the scrub at the intersection of Ridge Road and Sardar Patel Marg.

In India, it has been suggested that these insects migrate from the hills for the cold weather and early hot weather, breed on cultivated Cruciferae and return to the hills for the summer, although no return flight has been observed (Maxwell-Lefroy, 1909; Wynter-Blyth, 1957).

Female butterflies of this species, fertilised but without mature eggs, are capable of travelling 400 km without food in a few days. The stations on the plains where *brassicae* has been recorded, i.e. Peshawar, Amritsar, Patiala, Lucknow and now Delhi, are well within the dispersal range from Himalayan breeding grounds.

However, perusal of the literature concerning the early stages of this butterfly and

its appearance on the plains of India indicate several gaps in our knowledge.

Several authors have observed that this insect breeds freely on cruciferous plants in the plains during the cold weather and early hot weather. It has been recorded on the wing between late October and late May but there are no records between June and early October. Presumably, the weather is too warm during this period. This observation has led to the assumption that *brassicae* is only a sporadic migrant on the plains.

In other parts of its range, this butterfly is known to be capable of surviving severe and prolonged winter conditions in the pupal stage. There is no work on the tolerance of the diapausing pupae to severe summer conditions experienced on the plains of India. If it is proved that the pupae cannot tolerate the heat, then the traditional explanation of the appearance of this insect on the plains will hold true. On the other hand, if pupae can survive the summer heat, it indicates the need for work to clarify whether *brassicae* is actually a resident on the plains or a sporadic migrant. In any event, we have an insect that is either repeatedly attempting colonisation but failing, or has established a very tenuous foothold on the plains, so tenuous that when compared with its fecundity in the hills and the cooler parts of its range, its scarcity has led to the impression that it is a migrant.

April 15, 1997

PETER SMETACEK
Jones Estate, Bhimtal,
Nainital,
U.P.-263 136.

REFERENCES

- DONAHUE, J.P. (1967): An annotated list of the butterflies of Delhi. *J. Bombay nat. Hist. Soc.* 64(1): 22-48.
- MAXWELL-LEFROY, H. (1909): Indian Insect Life. Reprinted by Today & Tomorrow's Publishers, Delhi.
- PEILE, H.D. (1937): A guide to collecting butterflies of India. Staples Press, London.
- RHÉ-PHILIPPE, G.W.V. DE (1902): The butterflies of the Lucknow District. *J. Bombay nat. Hist. Soc.* 14: 481-493.
- ROSE, H.S. & G. VENKATESH, (1995): Notes on the biology of *Pieris brassicae* (Linnaeus) (Pieridae: Lepidoptera) on a new host plant *Cassia fistula* (Caesalpinaceae). *J. Bombay nat. Hist. Soc.* 92(3): 430-431.
- SANDERS, D.F. (1930): Occurrence of *Colias hyale hyale* and *Pieris canidia indica* in the plains. *J. Bombay nat. Hist. Soc.* 34: 591.
- WYNTER-BLYTH, M.A. (1957): Butterflies of the Indian Region. Bombay Natural History Society, Bombay.

28. THE NOTODONTID MOTH *CYPHANTA CHORTOCHLORA* HAMPSON IN KUMAON, NORTH INDIA

The taxon *Cyphanta chortochlora* was described by Hampson (1892) from a male specimen. The distribution is given as "Himalayas". The use of inverted commas stresses the uncertainty of the specimen's origin. In the same work, the range of the genus *Cyphanta* Walker, which includes another species, *C. xanthochlora*, is given as Sikkim, implying that Hampson believed that *C. chortochlora* occurred there.

Three specimens of *C. chortochlora* have been recorded from Jones Estate in the Bhimtal valley, Nainital district. The elevation is ca. 1500 m above msl. The data on the specimens, all males, is as follows:

26.ix.1991; 28.ix.1995; 29.ix.1995.

Forewing length 2.5 cm.

Further specimens were observed but not collected. A specimen was collected in Joshimath, Garhwal, at an elevation of 2300 m in August, but the specimen was destroyed in storage by museum beetles.

Besides matching Hampson's description,

the specimens examined have the following additional features; the forewing is excised along the dorsum beyond the brown mark on the inner basal area, much in the manner as the genus *Calyptra* (Noctuidae) but unlike the other member of the genus, *Cyphanta xanthochlora*. In addition to the black speck at the end of the cell of the forewing, there is a smaller black speck in the middle of the cell and an incomplete series of black specks along the termen, those on the upper half more prominent.

On the underside, the dark postmedial line is obscure on the forewing of one specimen but prominent on both the other specimens. The cilia of the forewing are green and of the hindwing ochreous.

The flight is fluttering, unlike the swift and purposeful flight of most Notodontids.

April 15, 1997

PETER SMETACEK
Jones Estate, Bhimtal,
Nainital 263 136
Uttar Pradesh

REFERENCES

- HAMPSON, G.P. (1892): The Fauna of British India including Ceylon and Burma, Moths, Vol. 1. Dr. W. Junk, The Hague, reprint 1976.

29. A NEW NAME FOR *HECALUS MORRISONI* RAMASUBBARAO & RAMAKRISHNAN

Ramasubbarao and Ramakrishnan (1990) published three new species, *Hecalus ghaurii*,

H. morrisoni, and *H. pusae*. Perusal of literature revealed that the name *Hecalus morrisoni* is